

INTERNATIONAL SEARCH REPORT

International application No.

PCT/NZ2005/000023

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. ⁷: A61H 31/00, A62B 7/00, A62B 18/00, A61M 16/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

DWPI, USPTO, eSPACE (IPC: A61H 18/-, A61M 16/-A62B ; KEYWORDS: nose, nasal, nostril+, naso+, nare+, cannula+, tub+, nozzle+, conduit, duct, prong, spigot, angl+, tilt+, bend, bent, flar+, corrugat, ridg+, flang+, +band, +strap, +harness)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6679265 B2 (STRICKLAND et al.) 20 January 2004 See figures 1 to 3 and item 26.	1 to 21
X	US 6637434 B2 (NOBLE) 28 October 2003 See figures 1 to 5B and items 36 and 46.	11 to 21
X	US 6561188 B1 (ELLIS) 13 May 2003 See figures 1 to 5.	1 to 10
X	US 6478026 B1 (WOOD) 12 November 2002 See figures 1 to 4, column 1 lines 52 to 57 and item 46.	1 to 21

☒ Further documents are listed in the continuation of Box C☒ See patent family annex

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
9 May 2005Date of mailing of the international search report
13 MAY 2005

Name and mailing address of the ISA/AU

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5595174 A (GWALTNEY) 21 January 1997 See figures 3 to 5 and item 18.	1 to 21
X	US 4782832 A (TRIMBLE et al.) 8 November 1988 See figures 1 and 9 and item 62.	1 to 21
X	US 4753233 A (GRIMES) 28 June 1988 See figures 1 and 2.	1 to 10

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See Supplemental Sheet.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: —

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

Supplemental Box

(To be used when the space in any of Boxes I to VIII is not sufficient)

Continuation of Box No: III (Observations where unity of invention is lacking)

The international application does not comply with the requirements of unity of invention because it does not relate to one invention or to a group of inventions so linked as to form a single general inventive concept. In coming to this conclusion the International Searching Authority has found that there are different inventions as follows:

1. Claims 1 to 10 are directed to a breathing apparatus comprising, inter alia, a nasal cannula shaped to fit within a user's nares and including at least one prong that is capable of high flow delivery of gasses and which creates a positive airway pressure in the user's airway and which has an angled end such that in use gasses flowing through the prong are directed to the user's nasal passages. It is considered that such an angled end comprises a first "special technical feature".
2. Claims 11 to 20 are directed to a breathing apparatus comprising, inter alia, a nasal cannula shaped to fit within a user's nares and including at least one prong that is capable of high flow delivery of gasses and which creates a positive airway pressure in the user's airway and which has an end that is flared outwardly. It is considered that such an outward flare comprises a second special technical feature.

These groups are not so linked as to form a single general inventive concept, that is, they do not have any common inventive features, which define a contribution over the prior art. The common concept linking together these groups of claims is a nasal cannula including at least one prong that is capable of high flow delivery of gasses and which creates a positive airway pressure in the user's airway. However this concept is not novel in the light of US 6679265 B2 (STRICKLAND et al.) 20 January 2004 for example. Therefore these claims lack unity a posteriori.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

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This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member					
US	6679265	AU	2002342108	CA	2462685	CN	1533288
		EP	1438086	US	2003079749	US	2004134498
		WO	03035141				
US	6637434	AU	2003280110	US	6561193	US	6848446
		US	2002162558	US	2004103899	WO	2004002560
US	6561188						
US	6478026	AU	13555/02	CA	2364183	CA	2368825
		CA	2416410	EP	1317940	EP	1317941
		US	6595215	US	6776162	US	6807967
		US	6863069	US	2002059935	US	2002092527
		US	2003116163	US	2004020493	US	2004104367
		US	2005028823	US	2005034730	US	2005039757
US	5595174						
US	4782832						
US	4753233						
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.							
END OF ANNEX							